

(19)



Europäisches Patentamt

European Patent Office

Office européen des brevets



(11)

**EP 1 312 294 A1**

(12)

**EUROPEAN PATENT APPLICATION**

(43) Date of publication:  
21.05.2003 Bulletin 2003/21

(51) Int Cl.7: **A47K 5/12, B65D 23/00**

(21) Application number: **02250779.2**

(22) Date of filing: **05.02.2002**

(84) Designated Contracting States:  
**AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU  
MC NL PT SE TR**  
Designated Extension States:  
**AL LT LV MK RO SI**

(72) Inventor: **Chan, Chik Sum**  
New Territories, Hong Kong (CN)

(74) Representative: **Findlay, Alice Rosemary  
Lloyd Wise**  
Commonwealth House,  
1-19 New Oxford Street  
London WC1A 1LW (GB)

(30) Priority: **14.11.2001 US 992088**

(71) Applicant: **Kado Industrial Company Limited**  
Shatin, New Territories (CN)

(54) **A container**

(57) There is disclosed a liquid dispenser(200) having a body (202) for containing a liquid, the body (202) having a lower end from which a protrusion (204) ex-

tends, and the protrusion (204) includes two parallel grooves (206a, 206b) on its outer surface, and that most of the transverse cross-sections of the protrusion (204) are of non-circular shape.

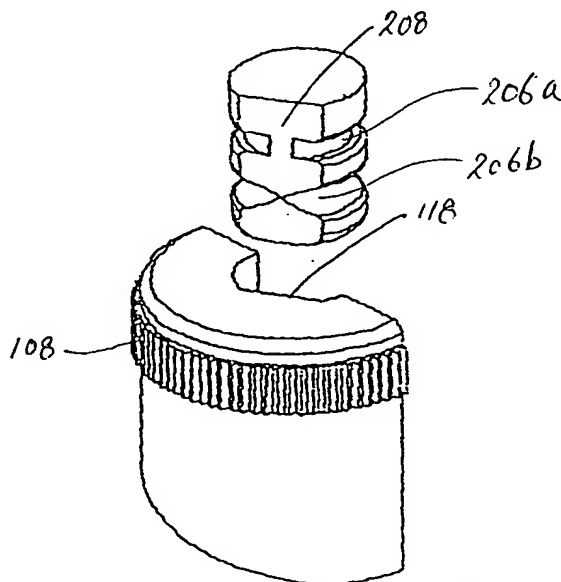


Fig. 6.

EP 1 312 294 A1

**Best Available Copy**

## Description

**[0001]** This invention relates to a container, e.g. a liquid dispenser, and, in particular, such a container suitable for, but not limited to, being engaged with a base member.

## Background of the Invention

**[0002]** Various containers, e.g. liquid dispensers, have been devised for being releasably, e.g. threadedly, engaged with a base member. For the purpose of discouraging unauthorized removal of the liquid dispenser from the place of use, the dispenser is usually provided with a protrusion with a spherical end, which will prevent the dispenser from supporting itself on an ordinary support surface, e.g. a sink counter top. However, it is found that after being used for a certain period of time, the dispenser may get loosed from the base member, so that it is necessary to tighten the dispenser into the base member again. Such shortcomings are sought to be at least mitigated by the applicant's European Patent Application No. 00306114.0 published on 30 May 2001 under No. EP 1 103 212 A1, the contents of which are fully incorporated herein as if repeated here.

**[0003]** When such a dispenser is used, e.g. as a liquid soap dispenser, in a hotel or on a commercial airliner, it may be desirable to have the trade mark or logo of the hotel or airline company printed on the dispenser. In such a case, it is desirable to ensure that the dispenser is so oriented that the trade mark or logo always faces the user, so as to promote the hotel or airline company. It is also found that it will enhance the ease of use of the dispenser if it is prevented from being rotatable relative to the mounting base.

**[0004]** It is thus an object of the present invention to provide a container which is adapted to be engaged with the base member in a limited number, e.g. one or two, of relative orientations only, in order to ensure that a particular side(s) of the dispenser will always face the user.

**[0005]** It is also an object of the present invention to provide a container which, when engaged with the base member, is prevented from being rotatable relative thereto.

**[0006]** It is a further object of the present invention to at least to provide a useful alternative to the public.

## Summary of the Invention

**[0007]** According to the present invention, there is provided a container having a body member for containing a liquid, said body member having a lower end from which a protruding member extends, wherein said protruding member includes at least a groove member on its outer surface, characterized in that at least a transverse cross-section of said protruding member is of a non-circular shape.

## Brief Description of the Drawings

**[0008]** An embodiment of the present invention will now be described, by way of an example only, with reference to the accompanying drawings, in which:-

Fig. 1 is a front view of a mounting base suitable for engagement with a dispenser according to the present invention;

Fig. 2 is a top view of the mounting base shown in Fig. 1;

Fig. 3 is a sectioned top perspective view of the mounting base shown in Fig. 1;

Fig. 4 is a sectional view of the mounting base taken along line A-A in Fig. 2;

Fig. 5A shows the manner in which a dispenser according to the present invention is engageable with the mounting base shown in Fig. 1;

Fig. 5B is a sectional view of the dispenser taken along line B-B in Fig. 5A; and

Figs. 6 and 7 are alternative perspective views showing the manner in which the protrusion of the dispenser is engageable with the mounting base shown in Fig. 1, in which the shank of the mounting base is removed for clarity purpose.

## Detailed Description of the Embodiment

**[0009]** A mounting base which may be engaged with a dispenser according to the present invention is shown in Figs. 1 to 4, and generally designated as 100. As in the case of the mounting base disclosed in EP 0 102 212 A1, the mounting base 100 includes a generally cylindrical body 102, from the lower end of which a shank 104 with a threaded end 106 extends. A ring 108 provided around the body 102 is swivelable/rotatable relative to the body 102 for operating locking mechanism of the mounting base 100.

**[0010]** A nut (not shown) is provided for engagement with the threaded end 106 of the shank 104 of the mounting base 100, for securing the mounting base 100 to a support surface. It can be seen that the upper surface 110 and the lower surface 112 of the body 102 are not parallel, thus allowing the dispenser (to be discussed below) to be positioned upright even if the mounting base 100 is secured to an inclined support surface.

**[0011]** As can be seen clearly in Figs. 1-4, the mounting base 100 includes a central cavity 114 sized and configured for receiving a protrusion of the dispenser (to be discussed below). A cylindrical extension 116 is provided on and extends upwardly from the bottom of the cavity 114. It can be seen that the shape of an entrance 118 of the cavity 114 is that of a circle truncated by a straight line 120.

**[0012]** Part of a dispenser according to the present invention is shown in Fig. 5A, and generally designated as 200. The dispenser 200 is of a structure and shape

generally similar to that disclosed in EP 0 102 212 A1. The dispenser 200 has a body 202 (part of which is shown in Fig. 5A in dotted line) for containing a liquid, e.g. liquid soap. Extending from and integral with a lower end of the body 202 is a protrusion 204 for insertion into the cavity 114 of the mounting base 100, for engaging the dispenser 200 with the mounting base 100. Provided on the outer surface of the protrusion 204 are two parallel grooves 206a, 206b, for engagement with locking mechanism and engagement mechanism of the mounting base 100, as discussed fully in EP 0 102 212 A1. At the bottom of the protrusion 204 is a circular recess 222 receiving the cylindrical extension 116 at the bottom of the cavity 114 of the mounting base 100, so as to support the dispenser 200 more securely.

[0013] A main feature of the protrusion 204 is that most of its transverse cross sections are non-circular. As shown in Figs. 6 and 7, the protrusion 204 has a cut-off region, so that a planar surface 208 is provided on a lateral side of the protrusion 204. In other words, the transverse cross section of the protrusion 204 has a shape of a circle with a cut-out region on its side, as shown more clearly in Fig. 5B. The protrusion 204 is sized and shaped to fit within the cavity 114 of the mounting base 100, with the planar lateral side surface 208 of the protrusion 204 matching a planar side surface 140 in the cavity 114 of mounting base 100. With this constriction, the protrusion 204 can be fitted stably within the mounting base 100, which complements the cut-out region by providing a compensating region. Such a design provides an arrangement to ensure better engagement between the dispenser 200 and the mounting base 100, so that the dispenser 200 is stable during operation of its pump and spout assembly.

[0014] While the protrusion 204 is shown here as being of a cylindrical shape having a cut-out portion, other shapes may be adopted. It is envisaged that a protrusion in the shape of an oval or triangular prism may be used. The similarity of these non-circular prism protrusion is that at least a transverse cross section thereof is always non-circular. The use of protrusion having such a construction prevents unintended rotation of its protrusion 204, and thus the whole dispenser 100, relative to the mounting base 100.

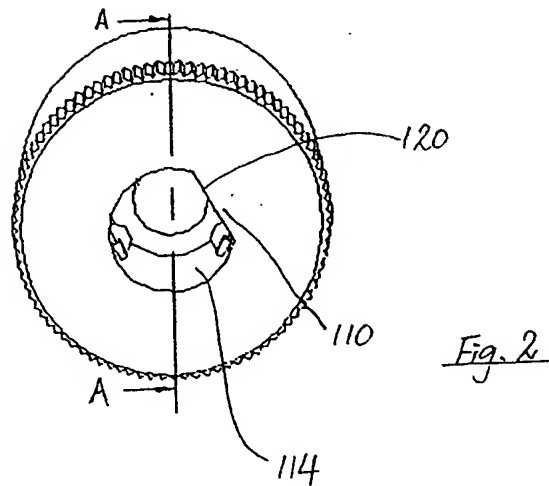
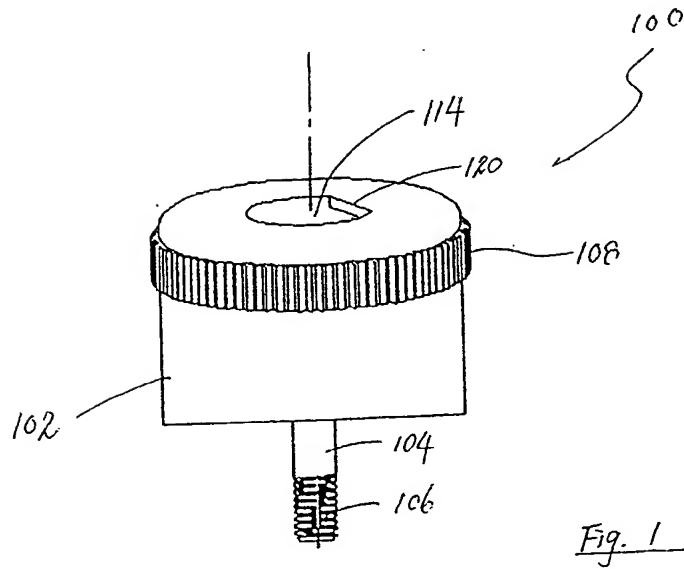
[0015] Such an arrangement also ensures that the dispenser 200 can only be fitted with the mounting base 100 in one particular orientation, i.e. with the planar lateral side surface 208 of the protrusion 204 matching the planar surface 140 in the cavity 114 of mounting base 100. It is of course possible to form the protrusion 204 of two planar lateral side surfaces, and to form the cavity 114 of the mounting base 100 with at least a complementarily shaped entrance, i.e. in the shape of a circle truncated by two straight lines, so that the dispenser 200 may be engaged with the mounting base 100 in two ways, and two ways only.

[0016] Alternatively, the protrusion may also have a non-cylindrical shape such as the shape of an inverted

pyramid, which can achieve the same function of preventing rotation of the liquid dispenser relative to the mounting base. Such will ensure that trade marks and/or logos printed on the body of the liquid dispenser will be viewed by the user.

#### Claims

1. A container (200) having a body member (202) for containing a liquid, said body member (202) having a lower end from which a protruding member (204) extends, wherein said protruding member (204) includes at least a groove member (206a, 206b) on its outer surface, **characterized in that** at least a transverse cross-section of said protruding member (204) is of a non-circular shape.
2. A container according to Claim 1 further **characterized in that** said protruding member (204) is adapted to be received within a cavity (114) of a mounting base (100) for engaging said container (200) with said mounting base (100).
3. A container according to Claim 1 further **characterized in that** said protruding member (204) is integral with said body member (202).
4. A container according to Claim 1 further **characterized in that** a lateral side surface (208) of said protruding member (202) is substantially planar.
5. A container according to Claim 1 further **characterized in that** said protruding member (204) includes at least two groove members (206a, 206b) on its outer surface.
6. A container according to Claim 5 further **characterized in that** said grooves (206a, 206b) are substantially parallel to each other.



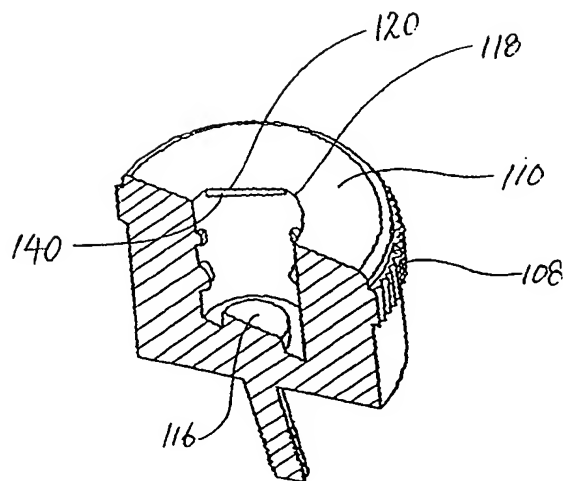


Fig. 3

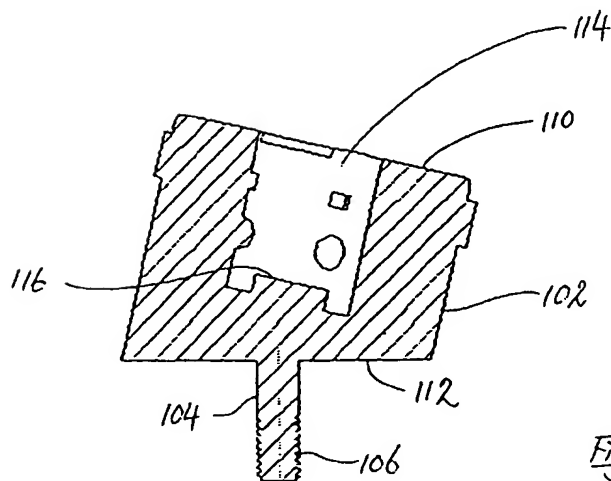
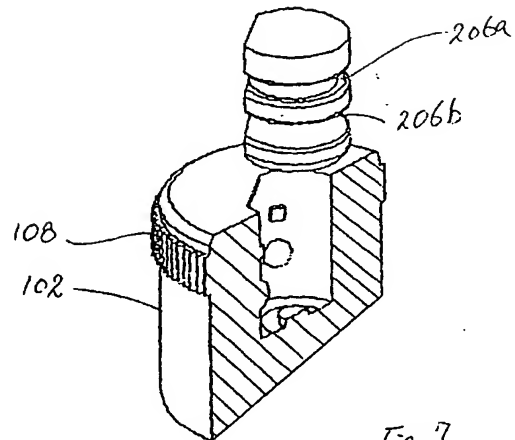
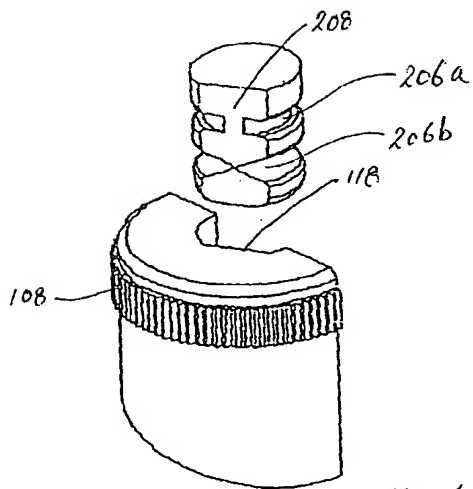
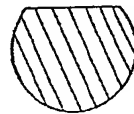
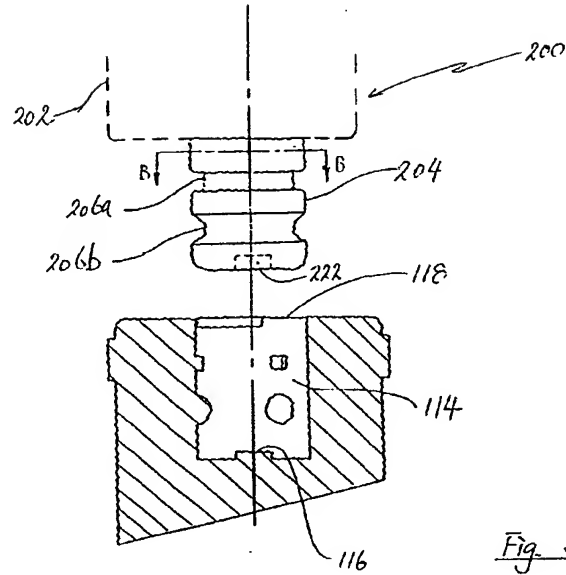


Fig. 4



EP 1 312 294 A1



European Patent  
Office

EUROPEAN SEARCH REPORT

Application Number  
EP 02 25 0779

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.7)
A	EP 0 997 384 A (KADO IND COMPANY LIMITED) 3 May 2000 (2000-05-03) * the whole document *	1	A47K5/12 B65D23/00
D,A	EP 1 103 212 A (KADO IND COMPANY LTD) 30 May 2001 (2001-05-30) * the whole document *	1	
A	EP 0 427 514 A (JAMES RIVER CORP) 15 May 1991 (1991-05-15) * the whole document *	1	
A	US 5 148 948 A (GRANVILLE RICHARD C ET AL) 22 September 1992 (1992-09-22) * the whole document *	1	
			TECHNICAL FIELDS SEARCHED (Int.Cl.7)
			A47K B65D
The present search report has been drawn up for all claims			
Place of search THE HAGUE		Date of completion of the search 22 January 2003	Examiner Vrugt, S
<p><b>CATEGORY OF CITED DOCUMENTS</b></p> <p>X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document</p> <p>T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons &amp; : member of the same patent family, corresponding document</p>			

EPO FORM 1503 03 82 (PatCo1)

1388 1388 1388

Best Available Copy

EP 1 312 294 A1

**ANNEX TO THE EUROPEAN SEARCH REPORT  
ON EUROPEAN PATENT APPLICATION NO.**

EP 02 25 0779

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report. The members are as contained in the European Patent Office EDP file on The European Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

22-01-2003

Patent document cited in search report		Publication date	Patent family member(s)		Publication date
EP 0997384	A	03-05-2000	EP	0997384 A1	03-05-2000
EP 1103212	A	30-05-2001	EP	1103212 A1	30-05-2001
EP 0427514	A	15-05-1991	US	4974753 A	04-12-1990
			AT	103562 T	15-04-1994
			DE	69007746 D1	05-05-1994
			DE	69007746 T2	11-08-1994
			DK	427514 T3	02-05-1994
			EP	0427514 A1	15-05-1991
			ES	2050966 T3	01-06-1994
US 5148948	A	22-09-1992	NONE		

EPO FORM P448

For more details about this annex : see Official Journal of the European Patent Office, No. 12/82

**Best Available Copy**